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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/607,871	06/30/2000	Borys S. Senyk	42390P8695	9971

7590

03/29/2005

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EXAMINER

MCKINNON, TERRELL L

ART UNIT	PAPER NUMBER
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3743

DATE MAILED: 03/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No. 09/607,871	Applicant(s) SENYK ET AL.	
	Examiner Terrell L Mckinnon	Art Unit 3743	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 June 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5, 7-13, 15, 17-24 and 26-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 8-13, 15, 18-22, 24, 26-28 and 30 is/are rejected.
- 7) ☒ Claim(s) 7, 17, 23 and 29 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 October 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>6/14/2004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Receipt is acknowledged of applicant's request for Continued Examination filed June 4, 2004. Claims 1-5, 7-13, 15, 17-24 and 26-30 are pending and an action on the merits is as follows.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-5, 8-13, 15, 18-22, 24, 26-28 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohashi et al. (U.S. 5,764,483) in view of Bausch et al. (U.S. 6,191,546).

Ohashi discloses a cooling unit and method for electronic equipment comprising:

- coupling a first heat transfer plate (14) to an electronic device (12) in a first part of a portable computing device (10);
- a second heat transfer plate (16 and 36) in a second part of the computing device (8) coupled to the first heat transfer plate;
- a close loop flexible (plastic, rubber) tube (18) that fluidly joins the first and second heat transfer plates together;
- the use of a heat transfer medium (water, oil, liquid refrigerant);

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- the use of a pump (40) coupled to the tube, wherein it would have been obvious to one of ordinary skill in the art at the time of the invention for the pump to circulate the heat transfer fluid at a rate of 1 milliliter/second to 10 milliliter/second to efficiently cooling the electronic components;
- the use of a disconnect connection (44a and 44b);
- the heat transfer plate comprises a plate-fin type liquid heat transfer plate; and
- the use of extensively dissipating heat (10 watts to 50 watts) at high capacities from the heat radiating plate (column 2, lines 45-50).

Ohashi fails to disclose sensing the temperature of the electronic device and causing the fluid to move when the threshold temperature is detected.

3. However, Bausch teaches the use of cooling a notebook computer comprising:

- a temperature sensor that senses the temperature of the electronic device, which activates a cooling device to operate when the threshold temperature is, detected (column 9, lines 50-55; column 2, lines 19-31, and column 10, lines 44-46).

Given the teachings of Bausch, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the cooling unit of Ohashi with a temperature sensor that sensing the temperature of the electronic device, and initiates fluid movement when the threshold temperature is detected.

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Doing so would improve the cooling performance and provide an optimal condition for cooling electronic devices within notebook computers.

Allowable Subject Matter

Claims 7, 17, 23 and 29 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Terrell L Mckinnon whose telephone number is 571-272-4797. The examiner can normally be reached on Monday -Thursday and every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Henry Bennett can be reached on 571-272-4791. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic

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Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "Terrell L. Mckinnon". The signature is written in a cursive, flowing style.

Terrell L Mckinnon
Primary Examiner
Art Unit 3743
March 24, 2005